UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,310	07/01/2004	David S. Bonalle	70655.1600	4309

20322 7590 05/06/2005

SNELL & WILMER
ONE ARIZONA CENTER
400 EAST VAN BUREN
PHOENIX, AZ 850040001

EXAMINER	
HESS, DANIEL A	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/710,310	BONALLE ET AL.
	Examiner	Art Unit
	Daniel A. Hess	2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 16-47* is/are rejected.

7)☒ Claim(s) *15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to 7/1/2004 initial filing by the applicant.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, pupil dilation would not be measured with a fingerprint sensor, since the pupil is of course located in the eye. Also what a fingerprint sensor has to do with motion is not clear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 11-14, 16-18, 20, 22-30, 35-40 and 43-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoshino (US 6,636,620). Hoshino teaches a smart card transaction system employing a fingerprint reader authorization system to provide authentication prior to the transaction teaching all of the elements and means recited in the above claims. For example, Hoshino teaches the following:

Re claim 1: Firstly, Hoshino falls squarely within the realm of transaction systems. Although Hoshino's discussion of transaction systems, including such client-server systems as ATMs, is primarily in the background (columns 1 and 2 of specification; see especially column 1, lines 25-50), it is clearly conveyed that Hoshino's system is intended to be applied in the realm of such transaction systems. Hoshino discloses (column 4, lines 30-45):

> *"Each client terminal 30 includes a user input device in the form of a keyboard 42, an IC card reader 44, and a fingerprint sensor, preferably in the form of a semiconductor fingerprint sensor 46 (see FIG. 3). It also includes a communications section 62 for transmitting and receiving information to and from the server 32. The fingerprint sensor may sense information related to a fingerprint using a multiple of small capacitors to detect the ridges and valleys of a fingerprint. A client terminal user puts an IC card 48 into a slot of the IC card reader 44. Each IC card 48 stores personal information of the card owner. The stored personal information includes information related to an ID number of the card owner and information related to a fingerprint of the card owner. It is preferred that the fingerprint information be encrypted. "*

In the above description, the IC card is a smart card in communication with the reader. The reader is in communication with the biometric security system, for it performs the critical role of reading fingerprint data associated with an individual which is stored on the IC/smart card. The fingerprint sensor obviously detects a proffered fingerprint sample. Hoshino recites (column 4, lines 45 onward):

> *The client terminal 30 as illustrated in FIG. 2 carries an authenticator 64 in addition to the IC card reader 44 and the fingerprint sensor 46. The authenticator 64 is electrically connected to the finger print sensor 46 and the IC card reader 44. It compares information related to a sensed fingerprint with the stored fingerprint information on the IC card 48 and produces an authentication signal if the sensed fingerprint information matches the stored fingerprint information. A transmitter 50 is electrically connected to the IC card reader 44 and the fingerprint sensor 46 for transmitting the sensed fingerprint information, the personal information read by the IC card reader 44 and the authenticating signal to the server 32 only if the authenticating signal has been produced. A receiver 52, for receiving an authorization signal from the server 32, and a display 54, for indicating that a client terminal user has been approved for accessing the computer of the server 32, are preferably included in the client terminal 30. The keyboard 42 is used by the terminal user for entering information. The transmitter 50 is rendered responsive to the keyboard 42 for transmitting information entered by the keyboard 42 to the computer of the server 32 upon or after receipt of the*

authorizing signal from the server 32. A controller 56 controls operations of the client terminal 30.

Thus, the device performs authentication using the sample and permits the transaction if a match is detected.

Re claim 2: In the case of Hoshino, the sensor performs authorization via communication, directly or indirectly, with a reader and a network (see figure 5). There are also dozens of known patents which teach a fingerprint sensor on the card itself.

Re claim 3: In the iteration shown in figure 4 of Hoshino, a finite number of scans is performed, namely one.

Re claim 4: (column 5, lines 50-55):

> If there is a match, the sensed fingerprint information by the fingerprint sensor 46 and the stored personal information read by the IC card reader 44 are transmitted from the terminal 30 to a server 32 long with an authenticating signal by step S6.

In order to send the sensed fingerprint data over a network, this data must be stored (logged) at least on a temporary basis.

Re claim 5: From the abstract of Hoshino:

"The database stores personal information of the service users. The stored personal information on the database includes information

related to fingerprints and ID numbers of the service users. "

Re claim 6: In figure 5, the database is on a remote server.

Re claim 7: As discussed re claim 4 above, the server system, which is associated with the database, also receives the fingerprint sample.

Re claim 8: See column 4, lines 35-40: "The fingerprint sensor may sense information related to a fingerprint using a multiple of small capacitors to detect the ridges and valleys of a fingerprint."

Re claim 11: As is clear throughout Hoshino, the very essence of the invention is comparing a proffered sample with a stored sample.

Re claim 12: At a local level (see figure 2) an authenticator 64 performs comparison in Hoshino.

Re claim 13: Authentication is made in Hoshino by comparison of a proffered fingerprint with a stored fingerprint. By definition, if a user's fingerprint is stored, they are registered.

Re claim 14: As recited in the abstract and elsewhere in Hoshino, the fingerprint sample is associated with a user's personal information.

Re claim 16: As discussed above, the fingerprint information of Hoshino is associated with a user's account information. But in addition, the fingerprint information of Hoshino can also be associated with account information (such as a credit account) because it can be used for authorization related to such an account (see background). Note that this can be an indirect association: for example the fingerprint sample may be associated with a user who is in turn associated with a financial account. Thus the fingerprint is associated indirectly with the financial account.

Re claims 17 and 18: See figure 4 of Hoshino, the claimed arrangement is essentially shown.

Re claim 20: Financial transactions have already been discussed re claim 1 above.

Re claims 22-24: These limitations are taught in Hoshino; see notably discussion re claims 1-4 above.

Re claim 25: A capacitive scanner has been discussed re claim 8, above.

Re claim 26: Comparing the fingerprint sample with a stored version is at the center of Hoshino's verification system.

Re claim 27: See discussion re claim 6, above.

Re claims 28, 43: See discussion re claim 11, above.

Re claim 29: See discussion re claim 12, above.

Re claim 30, 44: Hoshino discusses (column 6, line 37) ridges and valleys. These are minutia.

Re claim 35: See discussion re claim 1 above.

Re claim 36: See discussion re claim 2, above.

Re claim 37: See discussion re claim 8, above.

Re claim 38: See discussion re claim 4, above.

Re claim 39: See discussion re claim 3, above.

Re claim 40: See discussion re claim 4, above.

Re claim 45: See discussion re claim 5, above.

Re claim 46: See discussion re claim 12, above.

Re claim 47: See discussion re claim 12, above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9, 10, 19, 21, 31-34, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshino as applied to claim 1 above.

Re claims 9, 31: Hoshino discusses (column 6, line 37) ridges; differentiating among different types of ridges would have been obvious, as well as other features, would have been obvious because this can provide more accurate identification. These features are generally common among detected fingerprints (Kamei US 5,901,239 teaches for example bifurcation and other features). The motive for testing a variety of features is to have more data with which to perform verification.

Re claims 10, 32, 42: With the exception of those two features mentioned under USC 112 above, the claimed features are common among fingerprint sensors. For example, Tuli (US

5,942,761) teaches detection of body heat in association with fingerprints. The motive for such tests is to verify that the sample is indeed coming from a real live finger.

Re claim 19: Hoshino does not have any teaching showing explicitly that notification is provided upon detection of a sample. However, the opposite, a failure of the reader to detect a sample, would be evident to the user simply by a lack of response to proffering a fingerprint sample. Positive notification is merely an equivalent. Further, the applicant has not shown that positive notification of sample detection would materially affect the workings of the invention, as compared with what can be considered passive notification.

Re claims 21, 34: The use of pin numbers is discussed in the background of Hoshino; using this as a secondary verification system would have been obvious, because two separate security measures provide greater security than just one.

Re claims 33, 41: Storing multiple fingerprint samples is well-known in fingerprint security. For example, it is well known that police files include a *set* of fingerprints rather than just one. The motivation to store and compare multiple fingerprint samples is to achieve a better match than could be achieved with just one.

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In particular, the prior art known to the examiner fails to teach or suggest a fingerprint verification system wherein (in addition to the various limitations in claims upon which claim 15

depends) different fingerprint samples are associated with different kinds of accounts / information types in the manner claimed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents teach smart cards in relation to fingerprint sampling: US 2002/0188855; 6,012,636; 2002/0030581; 6,360,953; 4,582,985 and many others.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DH

DANIEL STCYR
PRIMARY EXAMINER